

The Severity of Intermediate Penal Sanctions: A Psychophysical Scaling Approach for Obtaining Community Perceptions

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The use of intensive supervision programs (ISPs) and other forms of intermediate penal sanctions is increasing in the United States. This paper describes a preliminary investigation of the extent to which informed New Jersey residents believe that intermediate sanctions that are currently being implemented in their state are severe. Using cross-modality matching of magnitude estimation techniques adopted from psychophysics, we obtained severity ratings of 32 sentences across six sentencing modalities (ISPs, probation, imprisonment, home detention, weekend sentencing, and fines) from respondents who had been briefed beforehand about what these sentences entail. Results indicate that our respondents agree that ISPs, weekend sentencing, and home detention have retributive "bite" and may be accepted as sentences in their own right. Probation was seen as being relatively lenient, while imprisonment was seen as highly severe.

KEY WORDS: penalty scaling; psychophysics; intermediate sentences; utilitarian policy.

1. INTRODUCTION

Alternatives to prison and probation sentences are occupying an increasingly larger role in penal systems in the United States and abroad (Ball *et al.*, 1988; Byrne *et al.*, 1992; Vass, 1990). These alternative sanctions include monetary fines, various forms of home confinement, including evening and weekend confinement, and weekend time in jail. One of the most innovative intermediate sanctions entails leaving sentenced individuals in their communities, but involving them in intensive supervision programs (ISPs) that restrict freedom and frequently monitor their location and activities. This sanction, designed as a stricter form of probation, is imposed on

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individuals who are thought to create no risk of harm for the people in the community.

1.1. The Current Movement Toward Intermediate Sanctions

In contrast to the failed efforts to implement alternative sanctions in the 1970s that were prompted by rehabilitation concerns (Ball *et al.*, 1988), the current movement toward intermediate sanctions was initiated by problems of prison overcrowding (Lurigio and Petersilia, 1992), the major crisis faced by the penal system today (e.g., Evans-Skovron, 1988). This crisis is far-reaching, resulting in escalating costs and the premature release of criminals, which in turn have fostered a sense of fear and distrust among the communities that these overtaxed penal systems are intended to protect (e.g., Doble *et al.*, 1991). Intermediate sanctions offer the promise of reducing overcrowding, thereby enabling the prison system to retain violent criminals for nearer the full term of their sentences and, also, to reduce costs, given the high expense of imprisonment (Byrne and Pattavina, 1992).

Other considerations make intermediate sentencing options attractive. First, in some cases, prison seems too harsh a punishment, and probation too lenient. At least theoretically, some intermediate sentences are less severe than imprisonment and less lenient than probation. If this is so, then their place between the somewhat disparately severe sentences of imprisonment and probation enables the courts to administer punishments of more appropriate severity in those cases (Ball and Lilly, 1988; Petersilia *et al.*, 1992a). Furthermore, these alternative sentences may have components designed to achieve multiple sentencing goals, such as reform of the criminal or restitution to the community or the victim, thus adding benefits beyond incapacitation and punishment. For example, an intensive supervision program (ISP) sentence may include treatment and supervision of offenders. Although the potential for reducing recidivism is questionable (Lurigio and Petersilia, 1992; Byrne and Pattavina, 1992), Pearson and Harper (1990) provide strong evidence that recidivism is lower among graduates of New Jersey's ISP program—which focuses heavily on rehabilitation and face-to-face contact with probation officers—than among criminals sentenced to prison who have similar demographic backgrounds and criminal records (including histories of prior convictions and drug use).

Given the increasing number of intermediate sentencing alternatives available—such as home detention, weekend sentencing, day fines, and ISPs—guidelines are needed for how and when to employ which sentences. Critical to these guidelines will be some understanding of how these different kinds of punishment compare with each other in terms of severity or “bite.” There exists, however, no standard measure of severity, no metric for its

measure. Determining relative severities among sentences becomes increasingly complicated as a wider array of sentencing alternatives becomes available, making it difficult to speak in terms of a “common currency.” For example, if a court wanted to sentence someone to 6 months in prison, but for various reasons decided that an ISP term would better serve the interests of the state, what duration of ISP sentence should be given to be equivalent in severity to 6 months in prison? At present, these decisions need to be made and are made solely on the basis of individual judgment.

1.2. Community Sentiment and Penal Policy

For several reasons, it is important that these (and other) penal system decisions reflect in their judgments the views of the communities that those systems govern. First, when individuals feel that the opinions of a group are discrepant from their own, they may feel alienated and less obligated to participate in activities associated with that group (Prentice and Miller, 1993). Agreement with community views fosters cooperation within the judicial system by those in the community who are asked to play a role in it, for example, witnesses and jurors in criminal trials or grand juries. A match between penal policy and community standards of severity produces certain utilitarian (deterrence) outcomes as well. For example, moral condemnation by a penal system that is in accord with the views of the community serves as a powerful (yet inexpensive) mechanism of compliance (Tyler, 1990): Pragmatically, and perhaps most importantly, penal system practices should be in accord with community views because the community is not likely to stand for them if there exists widespread sentiment that criminals are not receiving their “just deserts.” In addition to losing faith in the penal system—which carries the consequences mentioned above—the community, through the legislature, may actively fight to revise the penal system. Finally, when individuals do not feel adequately protected by a “revolving door” penal system, they may decide to take the law into their own hands by buying a handgun for protection (Smith and Uchida, 1988) or engaging in other forms of vigilante action.

The community sentiment that penal policy reflects would optimally be obtained from citizens who have been informed of the advantages and disadvantages, as well as other characteristics, of the various sentencing options available. Robinson (1993b) has made a distinction between the “everyday” community view and the thoughtful, enlightened version in which opinions are ascertained under a “‘veil of ignorance’ in ‘the original position’ where they do not know whether they be the offender” or otherwise. He has argued that the enlightened version can best fill utilitarian sentencing objectives, because a policy that takes into account community sentiment

must reflect each person's view of what is just or else risk losing moral credibility. Additionally, citizens called on to provide their views should be fully informed about what various sentences entail because they may encounter information in the media that does not accurately present sentencing conditions (e.g., Wilson, 1993). Our suggestion is that in the same way that citizens who act as jurors must carefully weigh evidence in a nonbiased manner, to the extent that the dispassionate views of the community can be obtained, they should be reflected in sentencing decisions in other ways.

1.3. The Severity of Intermediate Sanctions

Because noncustodial sentences such as probation have been perceived as nominal in severity, one obvious barrier to the widespread use of intermediate sentences is that they may be seen as too lenient. Common lore as well as prior investigations of penalty severity suggests that alternatives to prison such as probation are seen as nonpotent (Erikson and Gibbs, 1979; Sebba and Nathan, 1984) and as incapable of extracting "just deserts" from punished individuals (Ball and Lilly, 1988). However, it might be the case that citizens who have full knowledge about the limitations that probation places on an individual would judge it differently. In addition, some of the recently emerging sentencing alternatives may be perceived as severe in their punishment. Individuals who have been fully informed about what intermediate sanctions entail may prefer them to imprisonment or probation for the sentencing of certain offenses (Doble *et al.*, 1991), understanding how severe the community perceives intermediate sanctions to be can aid judges in implementing these sanctions in ways with which that community is in accord and as sanctions accepted on their own merits instead of convenient but inadequate alternatives to "real" punishment (Doble *et al.*, 1991; Robinson, 1993).

In summary, although the use of intermediate sanctions may advance the much desired improvement of the penal system in several ways, they should not be implemented without regard to the opinions of the community at large, especially with regard to concerns of penalty severity. Given that citizens do see intermediate sanctions as potentially viable alternatives, we are still left with the question of how severe these sentences are compared to more traditional sanctions (*viz.*, imprisonment and probation). The present investigation was undertaken to determine how severe intermediate sanctions would be judged relative to imprisonment. We focused particularly on comparing relatively short prison terms (under 5 years) with alternative forms of sentencing, because it is these shorter terms that are most likely to be substituted with alternative sentences. To determine the comparability of penalties, we obtained judgments of penalty severity across various terms

of six kinds of sentences: imprisonment, fines, ISP, weekend sentencing, home detention, and probation. We obtained these judgments by using a comparison technique common in psychophysical studies, specifically cross-modality matching of magnitude scaling techniques.

1.4. Using Psychophysical Techniques to Obtain Severity Judgments

Magnitude scaling techniques were developed in psychophysics as a means of obtaining judgments of the intensity of physical stimuli, such as brightness of light. These judgments are obtained by having respondents indicate the intensity of a set of stimuli across preferably two or more sensory modalities and then deriving scores using judgments obtained across these modalities (Lodge, 1981). For example, respondents may be asked to draw a line to indicate how bright a light is and then to squeeze a handgrip with a force that they believe is equivalent to the brightness of that light. These techniques have been used successfully to scale qualitative social stimuli (Stevens, 1966), including some quite similar to the ones that we examine [e.g., severity of traditional sentences such as jail, imprisonment, and fines (Erikson and Gibbs, 1979; Sebba and Nathan, 1984; Gescheider *et al.*, 1982)]. Sellin and Wolfgang's (1964) large-scale study of perceptions of crime severity was perhaps the first study to apply rigorously psychophysical techniques to questions of concern to criminologists.

In the present study, we obtained severity judgments of the 32 penalties listed in Table I by matching subjects' ratings of penalty severity obtained by line production (LP) and number estimation (NE). Respondents first drew lines to indicate how severe they believed each penalty to be (the longer the line, the more severe the sentence) and, later, provided numbers to indicate penalty severity (the larger the number, the more severe the sentence). It is assumed that respondents are able to judge social stimuli much in the same way that they can make judgments of physical stimuli, and a large empirical base, as well as analyses presented below, suggests that this assumption is tenable (e.g., Lodge, 1981; Stevens, 1966).

Magnitude scaling is more time-consuming for both investigators and respondents than typical survey instruments, because respondents need to be trained on the response measures, which are likely to be novel. Furthermore, preparation of the surveys themselves and scale validation once the data have been collected (described below) also make magnitude scaling more time consuming than other survey techniques. However, this technique is preferable to survey methods that rely on category scaling or Likert scaling because respondents are not restricted in answering to prechosen scale marks or within prechosen end points; magnitude scaling techniques can freely adjust to the true range of stimuli as respondents see fit (Cross, 1981; Lodge,

Table I. Penalties

6 months' probation
12 months' probation
18 months' probation
2 years' probation
3 years' probation
\$1000 fine
\$5000 fine
\$10,000 fine
\$25,000 fine
6-month weekend sentence
1-year weekend sentence
18-month weekend sentence
2-year weekend sentence
3-year weekend sentence
30 days' imprisonment
60 days' imprisonment
6 months' imprisonment
1 years' imprisonment
18 months' imprisonment
2 years' imprisonment
3 years' imprisonment
5 years' imprisonment
6 months' ISP
1 years' ISP
18 months' ISP
2 years' ISP
3 years' ISP
30-day home detention
60-day home detention
6-month home detention
1-year home detention
2-year home detention

1981). This is especially important in the case of judgments of penalty severity because we want respondents to use a large response range. For example, asking respondents to indicate the severity of a variety of sentences—for example, a small fine, a lengthy prison term, and several sentences in between, such as a 1-year home detention—on the same 11-point scale may constrain responses and thereby restrict variance at the scale end points (see, e.g., Lodge, 1981).

2. METHOD

2.1. Sample

A total of 44 respondents provided severity judgments of penalty severity using magnitude scaling techniques. Our original intention was to obtain

the sample entirely from a pool of people called for Grand Jury duty in New Jersey but, due to a random selection process, not actually asked to serve. Eleven subjects were chosen in this manner, and the court schedule made it difficult to procure other subjects in this way. The remaining 33 respondents were individuals contacted by telephone who worked in central New Jersey and were paid \$10 for their participation. Their names were selected randomly from a list of University employees and small businesses in and around Mercer County, New Jersey. The final pool contained men and women who varied widely in terms of occupation (e.g., janitor, mason, librarian, psychologist) and county of residence.

Overall, each respondent provided judgments of the severity of 32 sentences that covered minor sentences across six modalities: fines, probation, home detention, weekend sentencing, imprisonment, and community correctional supervision, the ISP program used in New Jersey. The sentences we selected were sampled from terms typically handed down in New Jersey State courts. Therefore, we did not include such items as \$20 fine and 5 years' probation, because these are atypical. When probation is assigned, for example, it is usually assigned at least for 6 months and rarely assigned for terms greater than 3 years.

2.2. Stimulus Materials

The 99-page survey was printed lengthwise (landscape) on 8.5 × 11-in. paper. It was administered in groups of 1 to 10 respondents. The survey took approximately 30–40 min to complete and included the following sections, which are later described in fuller detail:

- (1) a demographic sheet on which respondents indicated their county of residence, occupation, political affiliation, sex, whether they or any member of their family had been a victim of a crime, and the extent to which they favored or opposed capital punishment;
- (2) two nine-item calibration tasks, administered to provide data for scale validation and, also, to give respondents practice in using the number estimation and line drawing techniques that they would later use to indicate their judgments of penalty severity;
- (3) descriptions of each sentencing modality (see Appendix);
- (4) the 32 penalties for judgment using number estimation; and
- (5) the 32 penalties for judgment using line production.

2.3. Procedure

2.3.1. Calibration Task

Respondents first completed the demographic sheet. Then the experimenter read the calibration task instructions aloud as respondents followed

along. Respondents then completed the calibration tasks. The first page of the first calibration task, the NE calibration task, presented respondents with a 50-mm line assigned the number "50." Respondents were asked to proceed through the next nine pages, which contained lines ranging in length from 3 to 275 mm, and to generate numbers indicating how long each line was, relative to the 50-mm line. Respondents were not told the lengths of the 50-mm line or any of the other lines in the NE calibration task. The second calibration task, the LP calibration task, was the transpose of the first: Respondents drew lines to indicate how large numbers were (for numbers ranging from 3 to 275, corresponding to the length of the lines presented in the NE calibration task) relative to the number 50, which was the value assigned to a 50 mm line. Full details of the calibration procedures are given by Lodge (1981), from which the calibration tasks were adapted.

2.3.2. Descriptions of Sanctions

After completing the two calibration tasks, respondents read descriptions of the six sentencing modalities for which they would be providing severity judgments: fines, probation, imprisonment, home detention, community correctional supervision (ISP), and weekend sentences. These descriptions were constructed to communicate the limitations and restrictions that each sanction places on the liberty of sentenced individuals and represent the kind of information made available to the public about the sentences. The descriptions averaged 158 words in length (range, 83–224 words) for each sentence and are included in the Appendix. These descriptions were generated by criminal justice experts on the State of New Jersey Sentencing Pathfinders Committee and were tailored around actual, not ideal, sentencing conditions in the State of New Jersey. So, for example, the description of imprisonment indicated that most of these facilities are overcrowded by at least 30% and that the frequency of contact with community correctional officers is 30 times per month for offenders sentenced to ISP (see, e.g., Pearson and Harper, 1990). Subjects were asked to read each description thoroughly, until they felt that they had an understanding of what each kind of sentence entails, because they would not be able to look back at these descriptions when making their judgments.

2.3.3. Judgments of Penalty Severity

When all respondents finished reading the descriptions, the experimenter then read aloud the instructions for judging penalty severities as respondents again followed along in their survey packets. These instructions asked respondents to think about the sentence "\$15,000 fine" and assign to it their own number (their "reference number" or "modulus") that they

believed reflected its severity. Respondents were then instructed to proceed through the remaining sentences and assign numbers to them that reflect how much more or less severe they thought each sentence was compared to the \$15,000 fine. They read that if they believed a sentence was twice as severe, they should give it a number twice as large as their reference number, and if they believed that a sentence was one-fifth as severe, they should give it a number one-fifth as large. They were asked not to look back at their previous answers or at the sanction descriptions, and no one did so. Subjects then proceeded to indicate their judgments for the 32 sentences. By this point, respondents had experience with the NE procedure from the calibration task, and none reported finding it problematic.

Upon completing the NE task, respondents completed an analogous task for the LP portion of the survey. Respondents were instructed first to draw a line that they believed indicated the severity of a \$15,000 fine and then to provide LP estimations of the 32 penalties, using the first line as a reference. Thus, respondents generated their own moduli for both the LP and the NE tasks. Allowing subjects to choose their own modulus, as opposed to providing them with one, constrains their responses as little as possible (Cross, 1981; Lodge, 1981; Stevens, 1975).

The penalties were presented one per page in both the LP and the NE formats. The order of the penalties was completely randomized in each packet and within each format, yielding 2 random orders per respondent, for a total of 88 random orders in the study. This random ordering ensured that no two respondents received the same order of sentences, eliminating potential variance due to order effects (Cross, 1973; Parton *et al.*, 1991; Lodge, 1981; Sebba and Nathan, 1984).⁴

3. RESULTS

3.1. Measure of Central Tendency

Because magnitude scaling responses are often negatively skewed, and were so for this sample as well, we used the geometric mean as a measure of central tendency in the analyses presented below [see Lodge (1981) and Sebba and Nathan (1984) for discussions of why the geometric mean is superior to other measures of central tendency in magnitude scaling studies]. In calculating the geometric means, we first adjusted these data to account for the unique moduli (reference numbers) that respondents initially generated. We did this by dividing all responses by the moduli corresponding to

⁴Stimuli in studies using magnitude scaling techniques are rarely randomized in this manner, although this procedure is widely recommended. See Parton *et al.* (1991) for a discussion of this and other procedures that provide optimal results in magnitude scaling studies.

them (i.e., within a particular subject for a particular task).⁵ Therefore, if a respondent assigned a 6-month probation term a “500” for the NE task, and provided 100 as a modulus for that task, the final value for that subject that was entered into the geometric-mean calculation was “5.” Because some of the resulting geometric means were quite small (for example, for a \$1,000 fine), we multiplied all scores by 100, for the sole purpose of providing a more comprehensible scale. This transformation did not change the ratio relationships between severities assigned to different responses (because each term was multiplied by a constant).

Four respondents (one from the jury pool and three of the phone contacts) failed to provide a modulus on either the LP or the NE portion of the survey, making it impossible to calculate scale values for them.⁶ Two other respondents (one from the jury pool and one phone contact) did not appear to make ratio judgments on one part of the scale: For the NE task, one respondent wrote “10” for 17 of the 32 responses and “20” for an additional 8; another respondent’s LP responses were all 4 ± 4 mm, with no coherent pattern to the responses (this respondent’s entries on the demographic sheet also contained misspellings, suggesting that he may have had problems reading the instructions). Data for these 6 respondents were not included in the analyses, leaving a total of 38 respondents.

3.2. Scale Validation

Scales derived from cross-modality matching of magnitude estimation techniques rest on assumptions that respondents have made ratio judgments of the social stimuli as they would to physical stimuli (see, e.g., Lodge,

⁵Stevens (1975) suggests that without adjusting the data in this manner, the obtained geometric means still retain their ratio properties. However, we needed to use the arithmetic mean and arithmetic mean standard deviation in the calculation of the geometric mean standard deviation below, and the calculation of these would be overly influenced by the responses of those individuals who tended to use large numbers. Note that dividing each respondent’s responses by his/her respective modulus is functionally equivalent to adjusting each respondent’s modulus to unity yet preserves within-subject ratio relationships.

⁶This loss of data is one that we believe could be prevented in future studies using this technique. In the present study, we asked subjects to write their modulus ratings on the instruction page for each part of the survey. Given that subjects already had practice with the magnitude scaling tasks, and that the whole procedure had been outlined beforehand, those subjects who failed to provide a modulus may have felt that they knew what was required of them in the penalty rating sections, and therefore skipped the instruction pages. Alternatively, they may not have realized that they needed to indicate a number on those instruction pages, only to think of one for purposes of making future ratings. We would recommend that future studies using the procedure outlined here (1) stress to subjects the importance of going slowly through the instructions preceding each penalty rating task and (2) place the modulus items on a separate page following each instruction page.

1981). These assumptions, as well as the extent to which respondents' severity ratings were in accord with those of other respondents, are examined statistically below.

3.2.1. Ratio Judgments of Sentencing Stimuli

The assumption that respondents have made ratio judgments suggests that equal stimulus ratios (between two sensory stimuli) produce equal subjective ratios (between respondents' judgments of the intensity of the stimuli) (Cross, 1981). If this is the case for the data obtained here, then those data should be describable by a power function. In other words, when plotted against each other, the logarithms of the geometric means from each response modality should form a straight line (Lodge, 1981). To support this assumption, we correlated the logarithms of the geometric means of the NE and LP severity judgments. This relation was approximately linear, $r(32) = 0.97$, $P < 0.0001$, suggesting that the assumed power function was obtained.

3.2.2. Comparisons of Responses Made to Physical and Social Stimuli

Magnitude scaling techniques assume that subjects judge social stimuli in terms of quantitative attributes—as if they were judging aspects of physical stimuli such as the loudness of sounds. Cross-modality matching of two or more response modes allows for a test of this assumption. If respondents in the present study made judgments to the penalties as they would to physical stimuli, then any bias in the sentence scaling measures should be similar to bias in the calibration task, which provided respondents with actual physical stimuli to judge. Testing this assumption of equal bias entailed comparing the relationship between NE and LP severity judgments made to the (physical) number and line length stimuli, with the relationship between NE and LP judgments made to the sentencing stimuli. Such a test is possible because stimuli used in the NE and LP calibration tasks were matched, so that the numbers respondents judged in the LP task corresponded to the line lengths (mm) they judged in the NE calibration task. Similarly, respondents judged the same sentences in both the NE and LP response modes. If the assumption of equal bias has been met, then when the geometric means of the LP calibration responses are logged and regressed onto the natural logarithms of the geometric means of the respective NE calibration responses, the obtained slope should be approximately the same as the slope obtained by regressing the natural logarithms of the geometric means of the LP penalty severity judgments onto the natural logarithms of the geometric means of the NE penalty severity judgments (Cross, 1981;

Lodge, 1981). We conducted these regressions to obtain these slopes. Because we assumed error in both the independent and the dependent variables in these regressions, assumptions of ordinary least squares regression were not met (Pedhazur, 1982). Therefore, we used error-in-both variable regression to estimate the regression slopes and the error terms for the confidence intervals (Cross, 1974, 1981). For the calibration task, the obtained regression slope (b) was 0.90, with 95% confidence limits of 0.81 and 0.98. The obtained regression slope for the sentencing stimuli judgments was 0.83, not significantly different from the calibration-task slope and similar to slopes obtained in other studies matching LP to NE responses (see, e.g., Lodge 1981), suggesting that subjects judged the penalty severities as they would judge physical stimuli.

3.2.3. Subject Agreement

We then considered the extent to which our respondents were in agreement with each other about the relative severities of the various penalties. Within NE and LP response modes, each respondent's severity judgments were converted into ranks for that respondent. Kendall's coefficient of concordance (W) was calculated to yield a measure of cross-sample agreement of those ranks. This coefficient was high and reliable both for the rankings obtained from respondents' number estimation [$W(31)=0.50$, $\chi^2=561.42$, $P<0.0001$] and for respondents' line production rankings [$W(31)=0.50$, $\chi^2=568.24$, $P<0.0001$]. To facilitate interpretation of Kendall's W , Hays (1981) suggests that it can be viewed as a function of the average Spearman correlation (\bar{r}_s) between all possible pairs of rankings. Computed for both sets of rankings, this function yields $\bar{r}_s=0.49$. These analyses suggest that, although not in complete agreement, respondents were in moderately high concordance about the relative rankings of the penalty severities.

3.2.4. Determining Regression Bias in Each Response Modality

Past magnitude scaling investigations indicate that regression bias may operate in certain response modalities. In other words, the severities of small and large values are occasionally over and underestimated, respectively, in some response modes. To determine if any regressive bias was operating in our NE and LP measures, we regressed logarithms of the NE and LP calibration means onto the logarithms of the corresponding line lengths and numbers that were rated in those tasks. The obtained slopes represent the extent of regressive bias in responses (a slope of 1 would indicate no bias). These slopes can be used to adjust for this bias in our calculation of scale values [as "correction factors" (see Cross, 1974; Lodge, 1981)]. The LP responses

were somewhat regressive, ($b=0.89$), and the NE responses were virtually free of regression bias ($b=1.01$).

3.3. Calculation of Scale Values

Having found evidence that respondents were making ratio judgments of penalty severity, and that they were in reasonable agreement about the relative rankings of penalty severities, we proceeded to calculate scale values for the sentence stimuli. To incorporate both the LP and the NE responses, these values were calculated by raising the geometric means of the LP and NE scales to the reciprocal power of their corresponding correction factors and taking the square root of the product of these two numbers:

$$\Psi = \sqrt{NE^{0.99} \cdot LP^{1.12}} \quad (1)$$

where Ψ is the final scale value, NE is the geometric mean of the NE responses, and LP is the geometric mean of the LP responses. Sentences and their corresponding scale values are presented in rank order in Table II.

3.4. Comparison Across Sentences

The scale values listed in Table II are not interpretable in isolation, because the numbers have meaning only in comparison to each other. The ratios of numbers corresponding to different sentences are, therefore, meaningful. For example, note that 1-year probation, with a scale value of 54.29, was considered about one-half as severe as 1-year of ISP, with a scale value of 111.79.

We calculated 95% confidence intervals around the obtained scale values to facilitate comparisons among them. Following Shinn (1974), we derived standard errors of the NE and LP geometric means by multiplying the standard errors of the arithmetic means by the ratio of each geometric mean to the corresponding arithmetic mean. Then, using the correction factors obtained in the calibration task, we converted these into standard errors for each scale value by raising each geometric mean error to the reciprocal of the correction factors, multiplying these together, and obtaining the square root of the product (this procedure is analogous to our derivation of scale scores from LP and NE geometric means). We then constructed 95% confidence intervals for each raw score using the standard formula for calculating confidence limits around arithmetic means:

$$\Psi \pm (t_{(0.025)} \cdot s / \sqrt{N}) \quad (2)$$

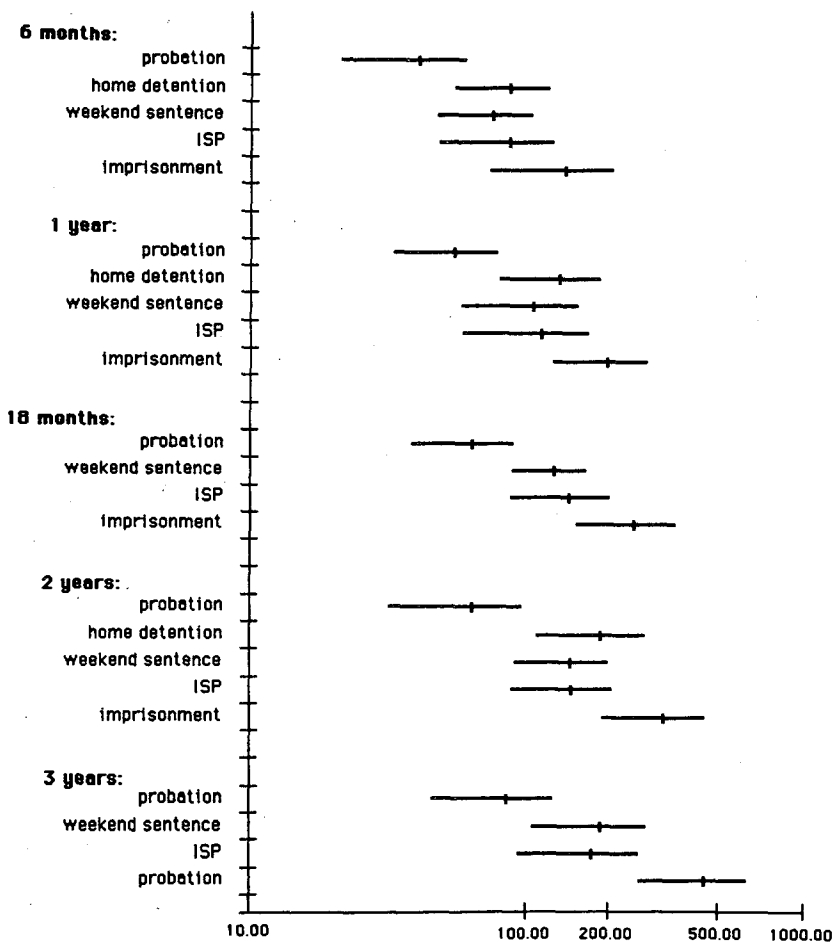


Fig. 1. Penalties, rated severities, and confidence intervals. The point on each line is the final scale value, and the lines extending from each point indicate the 95% upper and lower bounds of each penalty.

where Ψ is the scale value, s is the standard deviation of the geometric mean, and N is the sample size. The upper and lower bounds of these intervals are included in Table II.

Making an analogy to a t test, we can determine if one mean is significantly different from another by seeing if it falls within the obtained confidence interval of another mean. To facilitate these comparisons, Fig. 1 graphically portrays the severity ratings and 95% confidence intervals of the penalties (excluding fines) on logarithmic coordinates, arranged by term

Table II. Penalties, Rated Severities (Scale Values), and Confidence Limits

Penalty	Scale Value	95% lower bound	95% upper bound
\$1000 fine	16.12	11.74	20.52
6 months' probation	40.12	21.71	58.59
\$5000 fine	46.45	40.51	52.41
30-day home detention	50.02	28.67	71.45
1-years' probation	54.29	33.29	75.36
2-years' probation	62.90	32.50	93.42
18 months' probation	63.11	39.09	87.22
6-month weekend sentence	74.84	48.07	101.69
30-day imprisonment	74.97	45.62	104.43
60-day home detention	81.44	48.37	114.62
3 years' probation	84.68	46.82	122.66
6 months' ISP	85.25	49.22	121.42
6 months' home detention	85.94	55.53	116.47
\$10,000 fine	92.43	81.19	103.72
1-year weekend sentence	104.62	59.25	150.15
1-year ISP	111.79	59.96	163.79
60-day imprisonment	113.81	65.11	162.68
18-month weekend sentence	124.94	89.45	160.55
1-year home detention	131.44	81.38	181.67
6-month imprisonment	137.88	74.85	201.13
18-month ISP	142.70	88.73	196.85
2-year weekend sentence	143.40	92.14	194.82
2-year ISP	145.61	90.61	200.81
3-year ISP	173.91	96.78	251.32
3-year weekend sentence	186.82	107.81	266.10
2-year home detention	186.95	112.00	262.17
1-year imprisonment	196.29	126.33	266.49
\$25,000 fine	207.26	117.97	296.85
18-month imprisonment	245.08	154.98	335.48
2-year imprisonment	313.19	190.11	436.70
3-year imprisonment	440.97	260.25	622.31
5-year imprisonment	641.42	331.21	952.70

length.⁷ The score on each line represents the final scale value for each penalty and the line surrounding each point represents the 95% upper and lower bounds of that value. As indicated in this figure and in Table II, most of the prison terms were seen as more severe than equal length terms of

⁷This figure was designed to facilitate comparisons among sanctions with equivalent term lengths. Therefore, fines were not included in this figure because they are on a different metric (dollars, not time), nor were 30- and 60-day sanctions included because respondents made judgments of these term lengths for only two sentences—imprisonment and home detention. Thirty- and 60-day probation, ISP, and weekend sentencing terms are typically not administered in the State of New Jersey. Note that the difference between prison terms and home detention terms of 30 and 60 days is consistent with the pattern of punishments of longer duration; that is, the prison terms were perceived by respondents as being more severe than equal-length terms of home detention.

other sentences (the exceptions being the comparisons between 6-month imprisonment and equal-length terms of home detention and ISP and between 1-year imprisonment and 1 year of home detention). For example, the confidence interval for a 2-year prison term is 190.11–436.70. None of the scale values for 2-year sentences of any kind fall within that interval; the highest is home detention, with a scale value of 186.95. More importantly, the alternative sanctions of home detention, ISP, and weekend sentencing were seen as more severe than equal length terms of probation. Furthermore, the alternative sentences appeared to have some retributive power. For example, our respondents saw 18 months of ISP as equivalent in severity to a 6-month prison term, suggesting that it could be a useful alternative when an offense warrants a relatively light sentence. No intermediate sanctions were seen as equivalent to prison terms of 2 years or more.

The data in Fig. 1 and Table II suggest that there were three different severity classes within a given term length, with imprisonment being the most severe, probation the least severe, and the intermediate sanctions in between them. Equal-length terms of home detention, ISP, and weekend sentencing were not seen as different in severity from each other across term lengths. However, home detention was consistently seen as more severe than equal length terms of either weekend sentencing or ISP (although not significantly so), probably due to the heavy restrictions that sentence places on criminals, and sentences of ISP were usually judged to be more severe than equal-length terms of weekend sentencing.

4. DISCUSSION

Taken together, our survey findings suggest that the “intermediate sanctions” we examined are perceived as intermediate in severity between the perceived harshness of prison and the perceived leniency of probation. Second, there was a reasonable consensus about the relative severities of the various alternatives that we examined, at least among those whom we tested and, therefore, by extension, among the members of the community. Of course, the final test of this will require that the psychophysical scaling procedures that we used here be applied to a larger and more systematically drawn sample of state residents (such testing on a larger sample should also reduce the confidence intervals around each sentence). We feel that such an effort would be feasible and, also, worthwhile because widespread implementation of ISPs and alternative sentences might meet resistance. While it might be tempting to obtain community opinion with more easily administered measures (e.g., surveys using Likert or category scaling), magnitude scaling is uniquely suitable for assessing the kinds of ratio judgments necessary in scaling penalty severity (Lodge, 1981; Parton *et al.*, 1991). The comparative

ratings that we have presented for the various sentences, if validated on that larger sample, will be of assistance to judges attempting to follow a sentencing policy that is in accord with community notions of retribution and provides a wide range of alternatives from which to choose. Of course, to be fully in accord with community notions a sentencing policy would also have to take into account community notions of the perceived severity of various crimes. Studies measuring these perceptions have been conducted (e.g., Rossi *et al.*, 1985; Sellin and Wolfgang, 1964).

Because the intermediate sanctions are perceived by the public as having retributive value, their use as alternatives to prison will not automatically generate the dissatisfaction that is often associated with probation, which we found to be perceived as quite lenient. Those examining possible alternative sentencing practices have been particularly interested in ISPs because they maintain the offender in his job and in his home thus preserving the family unit (if one exists) and avoiding the high costs of imprisonment. It is thus heartening that our respondents saw at least the presently described version of ISP as relatively severe.⁸

The most striking feature of the data we have presented is this probation was consistently seen as nonsevere, and the severity ratings of alternative sentences of home detention, ISPs, and weekend sentences were consistently different from that low-severity rating. We are optimistic that the alternative sentences we examined can be seen as sanctions in their own right, each with its own characteristics that allow it to be administered in a way that best meets sentencing needs (cf. Ball, Huff, and Lilly, 1988). Optimal use of these sentences would take advantage of this flexibility, as opposed to simply turning to them as substitutions for prison terms when prison is not financially or physically feasible. Understanding how these alternative sentences measure up to prison sentences in terms of severity will facilitate the implementation of these sentences in a system that has typically relied on prison terms. For example, in a case where an individual might be sentenced to serve a 1-year prison term but the judge feels that rehabilitation is possible, that judge might instead sentence the criminal to a 3-year ISP term.

⁸In examining the results it is important to bear in mind that there is no one standard for ISP or home confinement. These sentences vary across states in intensity of contact, type of contact, frequency of contact, means of confinement (e.g., via electric signaling bracelet or random visits by community agents), treatment, curfew, types and degree of monitoring (e.g., drug monitoring), and restitution, among several other variables (Byrne and Pattavina, 1992; Lurigio and Petersilia, 1992). The description used in the present study is specific to New Jersey ISP practices (see appendix for a complete description), which rely heavily on face-to-face contacts and treatment programs. Other programs may vary in terms of their perceived severity. The results discussed in this article are based on the intermediate sentencing practices and policies of the State of New Jersey.

The sentencing aims of rehabilitation, restitution, and incapacitation have received considerable attention in the literature on alternative sentences (See, e.g., Ball *et al.*, 1988). Although the rehabilitation of criminals is a goal that has fallen out of favor in the criminal justice system, it is still an appropriate goal in many instances. Further, some citizens of the community may favor sentencing policies that include provisions for rehabilitation and restitution (cf. Doble *et al.*, 1991; Harland and Rosen, 1987). The present results provide a way of incorporating these goals while imposing sentences that citizens feel have retributive value. The construction of "hybrid" sentencing policies that satisfy multiple sentencing aims is feasible given the availability of several possible alternatives for punishment (Robinson, 1987a, b, 1993a); because several alternative sentences of appropriate length can be found that roughly match each other in terms of severity, a sentencing choice that fulfills, for instance, the criteria for both retributive and rehabilitative concerns may be found. Consider for example, an individual convicted of a nonviolent crime who deserves serious punishment under a policy of desert, yet is deemed capable of rehabilitation. If that person's presence in the community does not pose danger to citizens, an ISP for an extended period of time may be perceived by the community as just and, also, prevent the person from repeating the offense (given its intensive supervision provisions) and provide rehabilitative measures such as alcohol treatment meetings. It thus would be more desirable than probation, which might not be considered severe enough or capable of providing hope for rehabilitation (cf. Pearson and Harper, 1990), or imprisonment, which would fit goals of incapacitation and desert but is incapable of providing rehabilitation or restitution.

The considerable overlap we found among ratings of equal-length terms of weekend sentencing, ISPs, and home detention suggests that these sentences are to some extent interchangeable in terms of severity. Therefore, a judge handing down a sentence could substitute one for another as he or she sees fit to fulfill sentencing goals, and still remain in accord with community sentiment. It is likely the case that legal experts are best suited to determine what *kind* of punishment can best fulfill sentencing aims, but their decisions about term length should (and can) be in accord with community notions of severity.

As the above discussion suggests, there are a number of organizing constructs that people use when thinking about sentencing and sentencing options. Sentence severity or retributive "bite" is one such construct. However, we should make it clear that we do not think that it is the sole construct that the community uses in analyzing sentence suitability. But it is one that we suggest is important in the community's considerations of fair sentences, based on which intermediate sanctions have typically met resistance (Ball

and Lilly, 1988), and that is why it is the dimension on which we asked respondents to make judgments. Persons who are defending an intermediate sanction imposed on a specific offender have a vastly improved defense if they can demonstrate that the sentencing option extracts what the community regards as an appropriate amount of retribution from that offender, regardless of what other sentencing purposes it fulfills.

Although we found a high degree of consistency among our subjects' severity judgments, we ought to emphasize that, of course, public opinion regarding what constitutes severe punishment may shift over time. The use of intermediate sanctions is still in its infancy, and it will be important to monitor public opinion carefully regarding the appropriateness of using these sentences, as well as how severe they are seen to be. Data obtained from studies like this one are valid only to the extent that the respondents make decisions based on actual sentencing conditions. This is especially important because practices and conditions for the sentences change. For example, jails were not always overcrowded to the extent they are today, and the perception of the severity of imprisonment might vary based on that changing factor. This concern about revised practices is equally valid for intermediate sanctions; ISP programs in some states, for example, have substituted electronic monitoring for face-to-face contact with criminal justice personnel (Lurigio and Petersilia, 1992). Data obtained from this study, which used descriptions of New Jersey's ISP program that entails a high frequency of contact with supervisory personnel, may not be applicable to programs in other states, or even in the State of New Jersey if that program changes considerably. Because alternative sanctions are in their infancy, the descriptions of these sentences provided to respondents may represent ideal conditions, and not reflect actual sentencing conditions that will exist once these sentences have been implemented into an already overtaxed system.

Despite these caveats, we have reason to be optimistic about the growing role of alternative sanctions: The results of this study and others (e.g., Doble *et al.*, 1991) provide evidence that citizens do believe that intermediate sanctions are appropriate to fulfill retributive requirements of the punishment, when they are given information about what these sanctions entail as they are currently administered. Naturally, if an overtaxed administrative system decreased the overall severity of ISP, this decreased severity could create an analogue to the current distrust of the penal system's ability to protect citizens through punishment, deterrence, and incapacitation of criminals (e.g., Doble *et al.*, 1991).

It is important to reiterate that our respondents were given full descriptions of the penalties that they judged. The descriptions they received were drafted by individuals who were fully acquainted with alternative sentencing practices. Informal questioning tells us that ordinary persons do not have

much idea of what is involved in the various alternative sentencing practices. If penal systems hope to garner support for these programs, they should inform citizens about what these programs entail, so that they can counter caricatures, sometimes sensationalized portraits of alternative sentences often presented in the popular media (e.g., Hester, 1992; Wilson, 1993), that characterize them as trivial in their purpose and severity. Citizens who are kept abreast of developments in the penal system and understand the severity of alternative sanctions may be more inclined to support them. The present research, as well as other studies of the efficacy of alternative sanctions, suggest that the implementation of these sanctions has the potential to bring about reform both in the penal system (Petersilia *et al.*, 1992b) and in the public's view of that system. Attention to community views will be necessary to support and advance these reforms.

APPENDIX: SANCTION DESCRIPTIONS

Weekend Sentences

Weekend sentences punish offenders by requiring them to serve sentences on weekends at county jails rather than during the week. These sentences are usually imposed to permit offenders to maintain their employment, during the week. This type of sentence is characterized by the following:

1. Offenders report to jail on Friday evening, where they remain locked up until Sunday evening.
2. Offenders are placed in a cell of about 6 × 8 ft, usually occupied by at least one other person (sometimes more, due to overcrowding of jails and prisons; most jails are overpopulated by 30%).
3. Offenders are not permitted visitors or recreation.
4. Sentence is usually served for multiple consecutive weekends.
5. Offenders may be permitted to make a phone call while in custody.
6. Offenders are maintained at county expense while confined.

Fines

Fines punish offenders by requiring them to pay money weekly or monthly based on earnings or a percentage of everything they own. These are monies which would not be paid if offenders went to jail and are paid when offenders are under community supervision. Payment must be made regularly, and if offenders fail to make payment, and are able to, they may be placed in jail as a punishment. The fine money is given to the State and is returned to the general treasury.

Probation

Probation is a sentence imposed by a judge for a crime which does not require a custodial sentence and the judge determines probation is appropriate. Punishment for this sentence has two aspects:

1. First, it restricts liberty by curtailing offenders' movement and subjecting them to scrutiny by requiring them to report to a probation officer for purposes of determining whether probation conditions are complied with. The supervision may include surveillance by probation officers.

Offenders can be placed under various levels of probation supervision, from very strict to extremely loose, depending on the offenders' crime and the risk of future violations of the law. The number of contacts with offenders is important to establish the punishment level. Based on present probation staffing, contacts between probation officer and probationers are limited on average to twice per month.

2. Second, it imposes affirmative obligations on the offenders to complete sentencing conditions. These conditions may include:
 - (a) testing and counseling for drug and alcohol abuse,
 - (b) performing community service,
 - (c) paying restitution and all other fine and penalties ordered by the judge, and
 - (d) obtaining GED or participating in other educational programs.For successful completion of these conditions, offenders could receive additional credit toward the payment of penalties. For violation of the conditions listed in 1 or 2 above, offenders could be required to pay additional penalties including incarceration.

Imprisonment

Imprisonment punishes offenders by placing them in jail or prison. Jail and prison are characterized by the following:

1. Both have locks and bars.
2. Offenders are kept in cells of about 6 × 8 ft in which one or more prisoners are confined.
3. Offenders can leave their cells only with permission and must eat and perform all other activities only at specific times.
4. Offenders are fed, clothed, provided complete medical and dental care, and housed at public expense.
5. Offenders may be given leisure and recreation time.
6. Offenders are permitted to have visitors.

7. Offenders are not required to work. They may relax all day if they wish.
8. Offenders who violate prison or jail rules are subjected to additional penalties, such as solitary confinement, loss of visitor privileges, and remaining in custody for a longer period of time before parole.
9. Most jails and prisons are overcrowded by more than 30%.

Community Correctional Supervision (ISP)

This is a sentence imposed on offenders who might otherwise go to jail. When the sentencing judge determines offenders may be safely punished in the community without risk or harm to the public, Community Correctional Supervision is imposed.

Offenders are watched very closely and freedom is severely restricted at all times of the day and night. Community Correctional Supervision subjects offenders to many restrictions and requirements including the following:

1. Searches of offenders and offenders' homes and cars at any time.
2. Phone taps.
3. Frequent drug and alcohol testing.
4. Community service on weekends.
5. Mandatory daily diary and weekly budget keeping.
6. No borrowing money.
7. No welfare assistance.
8. Mandatory treatment meetings.
9. Must be home every night as early as 6:00 PM and remain at home until the following morning.
10. Payment toward the cost of being supervised.
11. Payment of all other court-ordered financial obligations including restitution and child support.
12. Frequent contact (30 times per month) with Community Correctional Officers and offenders.
13. Maintaining full-time employment.
14. Electronic monitoring, i.e., offenders are required to wear electronic bands around their wrists.

Home Detention

Home detention punishes offenders by keeping offenders in their homes. This punishment is characterized by the following:

1. Offenders must remain at home 24 hr per day, 7 days a week, for a specified period of time, from several weeks to many months.
2. Offenders can leave home only with permission and, then, for approved reasons only: to go to work, obtain emergency medical

- treatment, attend treatment meetings for alcoholism, drug addiction, etc.
3. To make sure offenders are staying at home, checks are made at all times of the day and night. Some offenders have an electronic bracelet placed on their wrists or ankles. If offenders try to remove the bracelet, a signal is sent to a computer to notify a probation officer of the attempt. The bracelet lets a computer know the offenders are still in their homes. Probation officers also make random visits to offenders' homes to check up on them.
 4. If offenders violate house arrest, they are subject to additional punishment which may include weekend sentences or jail.

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